

## Satellite Interleaving and Real-time Normal Point Data-Quantity Monitoring

G. M. Appleby and M Wilkinson

The current ILRS recipe for NP population is that sufficient returns should be achieved such that a NP precision of 1mm is reached. If a station is not currently capable of determining in real-time the NP precision, a compromise position is that 1000 single shots should be secured before attention is diverted to another satellite. In this Clinic Discussion we detail the software development carried out at Herstmonceux to provide in real time to the observer current statistical information as observations for each NP are received. We note that for the strict single-photon policy at Herstmonceux along with the 10Hz and 2kHz technologies, a single-shot precision of about 15mm is expected and indeed achieved when ranging to LAGEOS. Following Gaussian statistics, this precision implies that a NP precision of 1mm is reached once about 230 returns have been secured. The time required to achieve this number of returns in the NP interval depends on which laser is in use. We will explore with station representatives their experiences and requirements for setting up similar monitoring systems.